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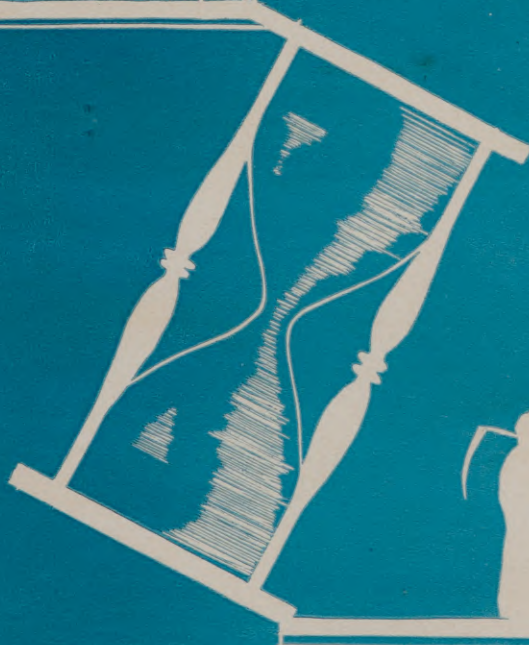
CINEMATOGRAPHER

The Motion Picture CAMERA Magazine



this issue

Controlling Photographic Reproduction
Standardizing Camera Equipment
An Insert-Car for Today
Lighting Economy
... and other features



January,
1936

Published in Hollywood,
by
American Society of
Cinematographers

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Next Month

- There will be a story from one of the leading Hollywood cinematographers on film . . . film of today and film of yesterday noting the progress made by the manufacturers as well as the technique of the cameraman in using film.
- Also Dr. Meyer will give us another of his articles on the laboratory practice.
- There will be contributions from the leading Directors of Cinematography on their methods and practices.

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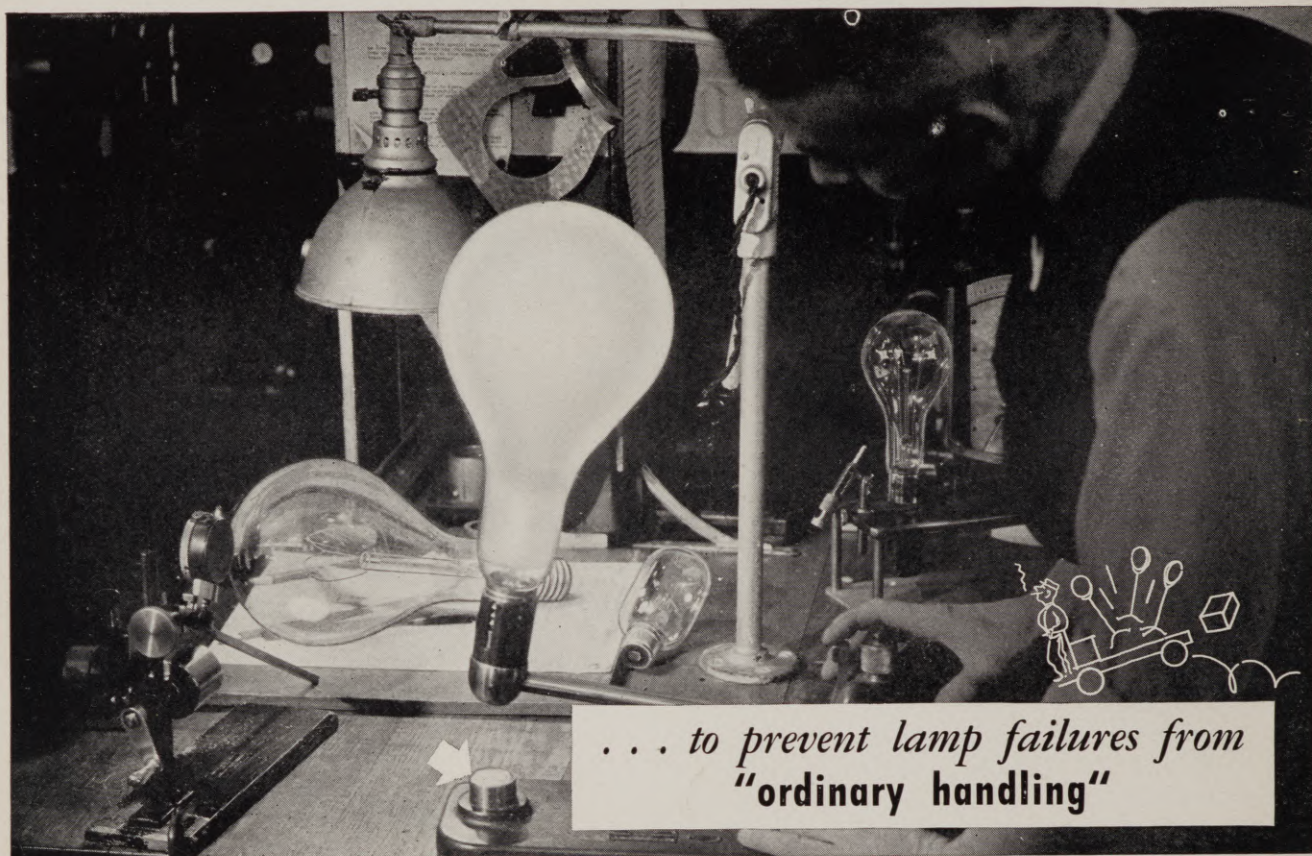
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to another hits the bump at the bottom of a ramp. The lamp is lighted and inspected again, especially for breaks in the stem or exhaust tube . . . breaks which would permit air to enter and end the life of the lamp.

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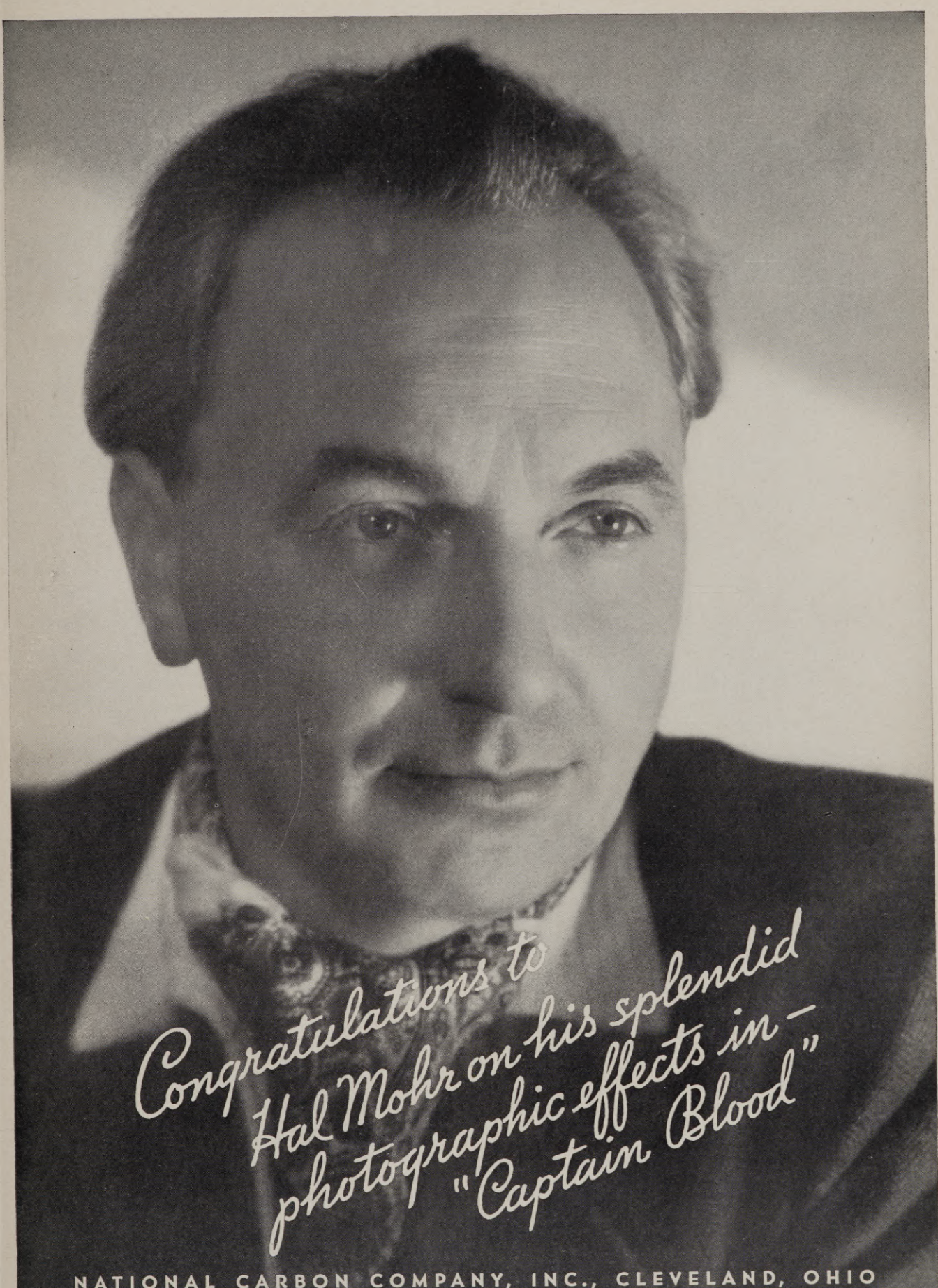
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Problems of Controlling Correct

AS STATED in the preceding article, correct photographic reproduction is accomplished by rendering visual sensation in the finished print identical to that conceived by the eye when the original object is observed. This visual sensation is controlled by the degree of overall brightness and contrast.

If we deal with an object of one even brightness only, which, for instance, is represented by a single color plane, the correct photographic reproduction is very simple depending solely upon a proper relation between the following units:

- Brightness of the object as a function of negative exposure.
- Negative exposure as a function of negative material speed.
- Negative development as a function of negative density.
- Negative density as a function of positive exposure.
- Positive exposure as a function of positive material speed.
- Positive development as a function of positive density.
- Positive density as a function of brightness of reproduction.

When, however, the object is composed of areas of differing brightness values and different colors, which is the case in almost every practical instance, the problem of reproducing identical brightness expands into that of reproducing the correct relation between all brightnesses or visual contrast. This is far more complicated, as will be seen by considering the characteristics which in this case must be placed in proper relation to satisfy correct photographic reproduction.

The total visual contrast in an object can be composed of brightness contrast, hue contrast, and saturation contrast. In ordinary black and white photography this visual contrast can only be rendered in the reproduction as brightness contrast, that is, hue contrast and saturation contrast become zero.

The additional factors of visual contrast and color, when reproducing objects composed of differing brightnesses and colors, require that the following characteristics are kept in proper relation during the processing of the negative and the print:

- Characteristic curve of negative material as a function of visual brightness contrast in the object.
- Color sensitivity of negative material as a function of visual hue contrast and saturation contrast in the object.
- Characteristic curve of positive material as a function of characteristic curve of negative material.
- Overall brightness contrast of print as a function of total visual contrast.

(In this analysis of the problem of correct photographic reproduction the subjective phase has not been included. This would have necessitated the consideration of the adaption level and the color selectivity of the individual observer's eye, referring to the visual sensation created by the object as well as the reproduction.)

Present day photographic technique utilizes many in-

Photographic Reproduction

PART 2

by
Dr. Herbert Meyer, A.S.C.
Head of Hollywood Research Bureau,
Agfa, Ansco Corporation

struments and methods for the purpose of properly controlling most of the above relations.

Objective brightness and negative exposure are determined by light meters.

Speed and gradation of negative and positive materials are analyzed by sensitometric instruments.

Chemical development of both negative and positive materials is controlled by sensitometric methods.

Positive exposure is selected by semi-automatic timing instruments which produce a graduated scale test.

There does not yet, however, exist a practical method or instrument which permit determining of the total visual contrast in the object or its three components, brightness contrast, hue contrast, and saturation contrast in relation to the characteristic of the negative material.

The explanation that, even without this important link, the reproduction of satisfactory and artistically beautiful photographic results is possible lies in the fact that artistic satisfaction created by a photographic reproduction is largely independent of the degree of correct natural reproduction. This is possibly due to the many visual sensation impressions received and recorded in our daily lives and which are all of widely different contrast relations, so much so that regardless of our familiarity with the object, our artistic imagination will very likely find the reproduction artistically pleasing no matter how truthfully the original visual contrast has been rendered.

This should not, however, lead to an attitude of satisfaction with our present status, which does not provide a dependable instrument or method to correctly calculate total visual contrast or its components in the object. Regardless of artistic satisfaction, there are many occasions when an accurate knowledge of visual contrast relations would be most helpful, for instance, when pictures are made on location over the length of a full day or of several days which might mean a very noticeable and undesirable change in brightness contrast in the object due to the shifting of the sun or to the natural change in sky conditions.

Before dealing with the possibility of solving the problem of determining visual contrast in relation to photo-

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Norbert Brodine, A.S.C.

It's the Audience That Pays—

Reminds Norbert Brodine

by
Harry Burdick

POSSESSED happily of a sharply analytical mind and a flair for delving into economic trends, Norbert F. Brodine carries on his practice of cinematographic art with the shrewd calculation and malice aforethought of providing the greatest amount of entertainment to the greatest number of persons who may give eye to his screened works.

He charts a careful cinematographic-commercial compromise, always aware that, despite the wide sweep of artistry at his command, he must fabricate a commercial product that will go out into the channels of trade and return suitable fiscal returns to its sponsor.

Small-town theaters and audiences comprise the bulk of motion picture audiences. They determine the ultimate financial success of any celluloid drama. Realizing this vital fact, Brodine makes pictures for this greatest audience.

Not that he plays down to any imagined low level of small-town intelligence. To the contrary, he has found it to be the most soundly critical of all audiences. He does, however, make a noteworthy distinction between the professional screen-gazers of Hollywood and New York, and the casual movie-goer.

It is, of course, a first temptation so to photograph any screen opus in a manner as to win instant applause from immediate studio officials and fed-up film reviewers.

Brodine staunchly rebukes this lure and pushes his horizon back to the ultimate consumer, so to speak. For therein lies the test-tube of the product. And it is significant to observe that so ably does he interpret his dramas to Mr. and Mrs. Average Audience that they win warm acclaim from professional critics as well.

With all the marvelous cinematographic instruments available for use plus a thorough comprehension of the manner in which these tools may be employed to produce epic sweeps of projected beauty, it calls for considerable courage to hew to the straight line of simple story revelation.

Yet, Brodine has found, the nation's greatest audience prefers a straight-forward depiction of action, understood easily and pleasingly, unhampered with cinematographic calisthenics.

He spends vacation periods and odd hours prowling about smaller communities, sitting in neighborhood and village theaters, observing audience reactions. He studies returns from his pictures, with discerning consideration to size and type of theater, and character of its audience.

His observations indicate that the average audience is absorbed in the visual action of screened characters; all other considerations are secondary. So he subscribes to his fundamental of always fully lighting faces. Audiences want to see those faces. He lights them so they can be seen—without exception, even though he must take artistic license at times to do so.

Audiences, he finds, want to relax and have the film's action brought to their eyes. To this end, Brodine makes clear pictures; pictures that can be seen in their entirety without effort; pictures that relate their tales in crisp, vivid sequences.

Though it may seem paradoxical, he has a strong liking for the use of effects. They aid in creating illusion and audiences, he finds, file past box offices in quest of illusion, make-believe, entertainment and escape from matter-of-factness.

But here again he strikes a careful balance between the art effect that contains only sheer beauty and the effect that is, candidly, of commercial worth. He is most solicitous not to, so to put it, over-effect. He draws the apt comparison of a musical composition of such delicate nuance that its charm is appreciated only by a select group of ultra-sophisticates artistically, and one of such intimate, readily-recognized beauty as to sweep into universal acceptance.

Never for a moment does Brodine disregard this cinematographic compromise with the commercialism that pays the bills. An artistic barrier, if you will, but a most valuable consideration in this era of balance sheets.

His observations into exhibitors' conditions, and these

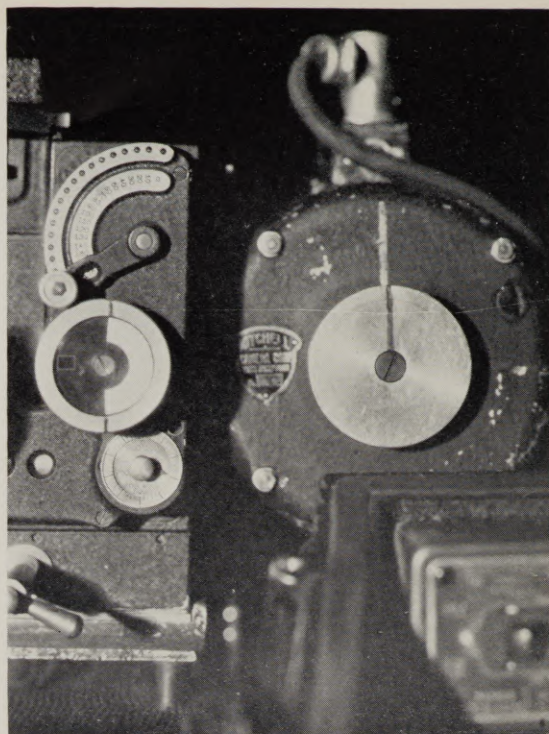
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Standardizing Camera Equipment

by

Emil Oster

Camera Executive, Columbia Pictures Studio



Grease-pencil marks on motor knob and shutter indicator synchronize any camera with background-projector.

THE PHYSICAL standardization of camera equipment and accessories is a subject which is very properly receiving more and more attention from the Industry. Such standardization can be of great benefit to a large studio; and it is of vital importance to a smaller plant. This discussion of the subject is necessarily based on the writer's personal experience in attempting such standardization of equipment at the Columbia studio, but the general principles can be applied equally to the problems of a larger plant.

It is just as well to begin by admitting that our policy of standardizing equipment was not due to any particular foresightedness, but was forced upon us by necessity. When I took charge of the Camera Department of the studio, the firm was regarded as one of the Industry's less important plants. Consequently, the equipment available was limited, and financial considerations precluded any hope of an extensive procurement plan. Nevertheless, at times when production was high, quite a bit of additional equipment was necessary. This of course was rented from individuals and camera-rental firms. And here came the problem: when you rent a camera, you get a good camera, but with little or no special auxiliary equipment. If the studio's own equipment—blimps, dollies, and so forth—is fitted with special gadgets, the rented equipment cannot be used freely unless extra time and money are spent in adapting it to work with the studio gadgets. Clearly, this would not be a good business policy! So the obvious solution is to standardize the studio's equipment and methods so that any commercially available studio camera or accessory can be used without modification.

One of the first things that came up was the matter of "blooming," or fogging the starting-frame of each scene so that picture and sound-track negatives can be easily synchronized. In many studios this is done by a little electric light known as a "bloop-light," which fogs a round spot on the starting-frame. But "blooming" is not a practice common to all studios, so very few rental cameras have a "blooming" system. A simple, but highly effective substitute was found in a routine which can be performed

with any Mitchell camera. At the start of a scene, the assistant simply racks the camera over into shooting position, and twirls the motor-knob until the shutter is open, completely fogging an entire frame. This quickly-made "bloop" is not merely as good as the conventional type, but more easily located in the negative or rush-print.

Another problem is the making of projected-background process shots. Unlike most major studios, we do not maintain a separate special-effects department: the production cameraman handles his own process work (except in rare instances where highly specialized trickery may be needed), and he films the process shots right in sequence with the rest of the picture, instead of doing all the process work after the normal scenes are finished. We use portable background projectors and portable screens, which are wheeled onto whatever stage the company may be using.

Under these conditions, it is out of the question to maintain special process cameras and process motors; yet the cameras and motors must be perfectly synchronized with the projector. We have found a simple method of synchronizing with standard cameras and motors, also with standard Mitchell cameras of the newer type, which have a visual indicator at the rear to show the position of the shutter. At the start of a process sequence, the projector and camera motors are phased. The cameraman then notes the position of the shutter-indicator, and with a grease-pencil draws a corresponding line on the motor-shaft knob. That's all there is to it. No matter what may occur during the day's work, the synchronization may be established in a few seconds. The camera may be moved ahead or behind—out of cycle—in reloading, or in making normal scenes between process-shots; but all that is necessary for re-synchronization is to turn the motor-knob until the position of the grease-pencil line on the knob and the shutter-indicator correspond. This can always be accomplished within a maximum of five turns. Once these marks coincide, the camera and projector are "in synk." Similar

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An Insert-Car to Meet Today's Need

by
Hans F. Koenekamp, A.S.C.

THE PHYSICAL conditions of picture-making today are in many important respects very different from what they were in the pre-Vitaphone era. With the exception of units making "chases" and process key-plates, our cinematographers are working with equipment vastly heavier and more bulky than was used ten years ago. Working technic, too, has changed notably. With regard to the auxiliary equipment used on the stages, the need for recognizing this fact has been readily apparent, and we have an abundance of cranes, dollies, rolling tripods, and the like, all designed and built to cope with present-day problems.

But as for camera "insert-cars," which are a very important piece of equipment in any man's studio, we have in most cases seen fit to let nature take its course—and struggle along with pre-talkie equipment, usually overloaded to a dangerous degree, and falling short in necessary performance. In a way, this is logical enough, for a good insert-car represents a tidy investment and should be expected to outlast many lesser units. So in many instances, we have tried to get by with old equipment, or with makeshifts in which the larger camera-carrying trucks were pressed into service as photographing cars.

Within the past six months, however, the Warner Bros.' studio has developed a really modern insert-car—the first, we believe, which has been designed and built specifically to meet modern conditions. While the machine was designed and built under the direct supervision of Art Klein, head of the studio's mechanical and transportation departments, it represents a combination of ideas gleaned from cameramen, directors, drivers, and virtually everyone on the lot who has ever had anything to do with camera cars. And it is a very successful composite!

The chassis is a standard Lincoln passenger-car. The regular Lincoln motor, which developed 90-horsepower, has been modified in the studio shops to develop over 135 hp. This was done by fitting new camshafts, a downdraft intake system, and raising the compression. The gear-ratio has at the same time been lowered by installing the same gears used in the Lincoln 7-passenger limousine, which is the lowest-geared of the line. None the less, the car can

reach a speed of nearly 70 miles per hour, fully loaded, and can tow another car (from either side of the rear) at better than 50mph. The acceleration, of course, is remarkable. Special springs have been fitted, to give the ultra-smooth riding demanded while yet carrying the abnormally heavy loads, and blowout-proof balloon tires are fitted on extra-sturdy 18-inch wire wheels. Thanks to excellent bearings, the car can, if necessary, be rolled by the stage crew like an ordinary dolly.

In designing the camera-carrying features, special care was taken to provide for mounting as many cameras as necessary, to give a wide range of possible angles, and perfect rigidity. There are no makeshift set-ups; the problem of adjusting tripods, tying them down, and so on, is eliminated. Four basic camera-positions are provided: the conventional front platform, rear platform, in the body of the car, and atop the driver's cab. While the cameras are rigidly mounted, the mounts may be adjusted in a wide, and perfectly overlapping range of heights. The underpinning of the mounts consists of tubular, chrome-molybdenum steel railings, across which are clamped U-shaped duralumin bars, upon which fit the mounts for cameras, lights, microphone-boom, etc. These mountings are adjustable in any direction. To take a single one of them, for example: the rear-platform mount consists of four tubular uprights, connected by two longitudinal members which carry the flat camera-bar. By means of clamps, the longitudinal members may be set at any height from platform-level up to over three feet. The camera-bar may be slid forward or back along these rails, while the camera-mounts may be locked at any position along the bar. A supplementary mount, just at platform-level, provides for ultra-low set-ups, when needed, and when the platform is not in use, a removable tubular member across the rear serves as a

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Progress in Lighting Means Economy

by
Walter Strohm

Chief Engineer,
Twentieth Century-Fox Studios



MAKING moving pictures isn't a question of "getting by," but of turning out first-class product with the minimum loss of time and expenditure for labor and such raw materials as film, electricity, etc. If we can make one lamp do what two were often required for—if we can make 1,000-watt globes out-perform 2-KW ones, we save time, labor, and current (not to mention reducing replacement-charges): and with these savings on one side of the ledger, the first cost of equipment quickly vanishes.

For example, we could probably still "get by" making talking pictures on an old-time glass stage—but who would want to do it? Think of the time and effort expensively lost in adjusting the maze of cloth diffusers over the set—in juggling reflectors around to provide light effects—and of trying to keep a consistent lighting in spite of the ever-changing movement of the sun! Yet, back around 1914 (even later in some instances!) that was so completely the natural way to make pictures that most executives, directors, and even cameramen fought strenuously against the innovation of artificial lighting. In D. W. Griffith's "The Clansman" ("The Birth of a Nation"), which was one of the early films I worked on, virtually the only artificial lighting used was provided by magnesium flares. A year or so later, when I was with Chaplin, just after he left Mack Sennett, the interior scenes were made on a daylight stage, with the sets erected on a revolving platform. Theoretically, all that was necessary to keep the lighting constant was to revolve the platform (and the set) as the sun's angle changed. But each time, a myriad of reflectors had to be readjusted, the diffusers changed, and so on—while the company waited. It was not until the production of "Easy Street" that Chaplin decided that while he might be "getting by" without lights, he would get by a whole lot better and faster under arcs.

The arc, in those days of Orthochromatic film, was of course the most logical choice for studio lighting. Even though few really high-powered incandescent globes were available, some experiments had been made, especially

with the "daylight blue" variety; I made some myself, and I know other individuals and studios, including Universal, had; but with a film that so strongly preferred the blue light of the arc, these experiments were not especially successful.

None the less, they had persuaded me that if the right film could be had, and the right equipment developed, the incandescent lamp would have basic advantages. It would be simpler and easier to use; it would require few, if any, special adjustments, and would stop those ubiquitous gentlemen who feel they can improve any moving mechanism into which they can get a screwdriver or a pair of pliers. And of course, you could do things with an incandescent that you never could with an arc—tuck it away in a cramped space and forget it, point it straight down, or at any old angle, without losing efficiency, and so on.

But it was not until Panchromatic film began to come in that the incandescent was a practical possibility. When that development occurred, I took the bull by the horns, and with the cooperation of Lee Garmes, who was the cinematographer on the production, we made the first feature completely lit with incandescent lamps, at the old First National studio in 1926; the picture, I think, was called "The Rebel." For general lighting, I simply used ordinary floodlighting units such as are used to floodlight any building or sign. But for spotlighting, I had a much different problem. No high-powered Mazda spotlights existed. A simple list of the attempts made with lenses, experimental metal and glass reflectors, and so on, would fill a volume. Finally, thanks in no small way to the untiring efforts of Peter Mole and Elmer Richardson, who had just launched the Mole-Richardson firm, the General Electric Engineers, and others, the ancestor of the present drum-type reflecting Mazda spotlight was evolved. With the facts and figures carefully compiled from actual experience in making a full-length feature under Mazdas, Fred Pelton and I presented the case to the A.S.C. and the Academy, with

Continued on page 16

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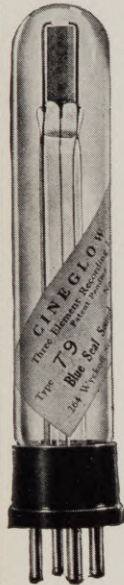
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Standardizing Camera Equipment

Continued from Page 10

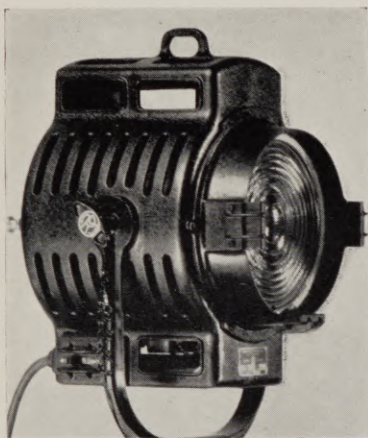
markings, of course, are made on corresponding points in the projector, so that projectionist and camera-crew can proceed independently, confident that when a scene is started, their machines will always be in phase. No telephoning or shouting messages from camera to projector are necessary to establish this fact. The only time that thought of phasing is necessary is when the troupe moves to another stage, fed from a different distributor. Then the phasing and marking operations are gone through again, and work goes on as before. Best of all, the same cameras and motors used for normal production can be used, unchanged, for process work, whether they are studio-owned or rented equipment. Any number of cameras may be used, all in perfect "synk" with the projector.

The matter of such auxiliaries as blimps, tripods and cranes was another difficulty. When camera-booths gave way to blimps, every studio, naturally, devised its own type, to meet its special needs. Sound men, cameramen, and machinists were rather feeling their way along, improvising at every other step. Inevitably, each studio evolved a lot of

special fittings for use with its own blimps. Often, the cameras themselves were extensively modified, sometimes to the point where they could be used only in their own special coverings. Because of our particular equipment problem, we could not afford the luxury of such special blimps and fittings. Our blimps had to accommodate not only our own cameras, but also those we might rent. And the latter could not be changed to suit our blimps!

After a careful study of the blimps commercially available, we standardized on the type designed by Victor Raby, and manufactured by the Studio Equipment Company. We have purchased a number of these, and rent others—from several sources—when we need additional equipment. Any standard Mitchell camera can be used in these blimps, put in or taken out at a few seconds' notice. Our crews have the advantage of knowing that every blimp and camera they may use will fit each other perfectly, without any changes or adjustments, and with no special gadgets to worry about.

For much the same reason, we have standardized on Fox "Velocitators" and

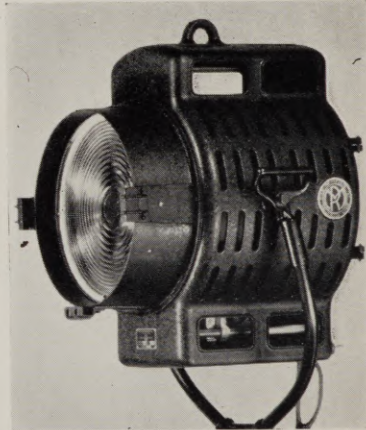


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Raby's small crane-type dolly. The latter is particularly advantageous in that the crane-arm is mounted on a rotating platform, and may be revolved through a full circle, eliminating the difficulties encountered when trying to make an extended panning shot from a fixed-arm crane. We have also standardized on a modification of the M-G-M-Mole-Richardson type of cranked pan-and-tilt blimp head. The average free-head, we have found, when used with a heavy blimp, lacks the balance necessary for really facile operation. The cranked head takes the strain of counterbalancing the blimp from the Operator's arms, and allows him to operate the camera more accurately. We have substituted a lighter construction, largely of duralumin, and provided a dual-ratio gearing in the panning movement, one ratio giving a slow pan, another a fast one. These heads are interchangeable, and may be shifted from cranes to rolling tripods very easily, while, if necessary, ordinary freeheads may be substituted when working without the blimps, as in synk shots, "wild" shots or on location, when only fabric soundproofing is used.

Fortunately, since the time when I entered the Columbia studio, the firm has prospered and, so to speak, come up in the world. More and better equipment

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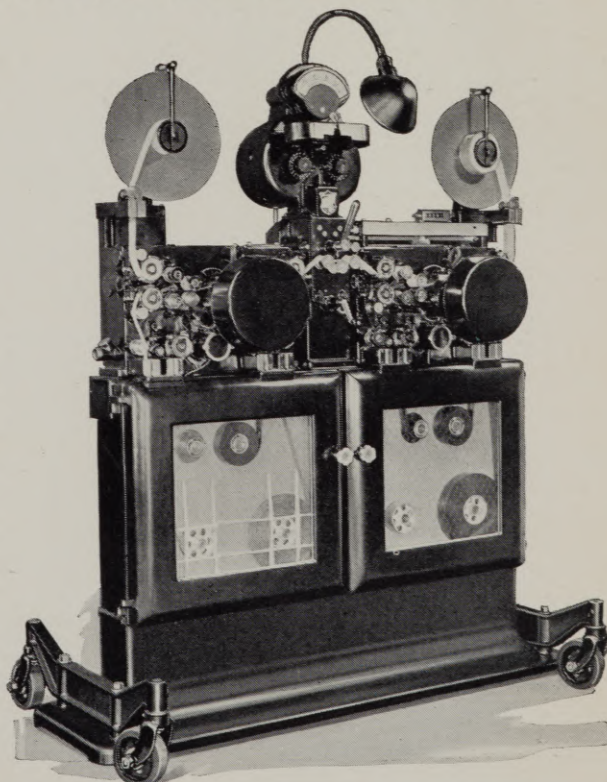
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is now permanently in our equipment lockers; much of the old apparatus has been replaced with the latest and best. But the value of this standardization of practice and equipment is no less great today than it was then. If anything, it

is paying bigger dividends now than it did when we first awoke to the need of standardization; and I do not believe that any studio can ever be big enough to overlook the benefits such a course can bring.

Progress in Lighting Means Economy

Continued from page 12

the result that the two organizations conducted their historic researches into the possibilities of Mazda lighting. The "Mazda Marathon" definitely proved the Incandescent to be superior for use with Panchromatic film; but I doubt if the innovation would have been accepted so readily had not sound arrived to force the issue. The "Inkie" was the only really silent lamp available, and it naturally sprang overnight into general use.

The new Solarspots are just as basic an improvement. In the first place, they really direct their light where you want it—and they utilize the light from the globe efficiently; they don't throw any of it away.

Our conventional 18's don't do this. Even when they are fitted with "spill rings," they scatter a lot of light where it not only doesn't do any good, but where it is definitely unwanted. Putting on the spill ring of course reduces the amount of light-leak, but at the cost of killing off the illumination from the entire front side of the globe. And when you begin to flood the lamp out from its tightest spot, you immediately begin to produce a dark-spot in the center, which increases until at full flood, you have a tremendous difference in strength between the center and the edges of your beam. To get around this, most of us waste still more light by diffusing, and frequently by using two lamps where one really efficient one would do.

These new Solarspots are really efficient. They don't show any dark spots, and I have yet to discover any objectionable hot spots. And their beam is a real beam; the spilled light problem is really and conclusively solved. Thanks to their "Morinc-lens" optical system, they have a perfectly flat field, and utilize almost every possible bit of light that the globe emits.

In practice, this means that in set-lighting, where we would often have to use two of the drum-type lamps, overlapped and diffused, to get away from the dark spots and other failings of such lamps, we only need to use a single Solarspot. In both general and personal lighting, we find that vastly less diffusion is necessary. At present, we are actually using more diffusion than we really should; a 1,000-Watt globe in a Solarspot will turn out more really

usable light than does a 2,000-Watt globe in a reflector-spot; right now, we are using up a stock of the larger globes, and diffusing. When we can standardize on the smaller globes, we will be able to get away from 90% of our present diffusion.

But to me, the really big thing about these new lamps is the fact that the spilled light problem is gone forever. Did you ever stop to think how much valuable time a company loses while the grips "gobo off" this lamp, or hang a "flag" on that one? Well, as we are proving, it runs into real money. With Solarspots, you can place your lamp, focus it—and forget it. No spilled light to give the camera trouble!

But the convincing touch, to me, came when after using the new lamps for several days, a cameraman who had protested the change with all the vehemence of outraged conservatism said, "Walter, I wouldn't have believed it possible to get so much light from so small a lamp. I can get it into places I wouldn't even try to use an 18—and I never saw a lamp that gave a beam so perfect for photography. You were right after all. When can I have some more of them?"

It's the Audience That Pays

Continued from page 9

only too realistically control the studio situation, bring to light other items of engaging interest that may well be borne in mind by those who create cinematographic works.

Not all theaters have projection facilities the cinematographer expects. Many of the smaller halls have insufficient amperage to do justice to scenes heavily diffused. As the result, many a scene that is a cinematographic chef d'oeuvre in studio projection rooms or in the splendidly equipped larger first-run houses and to which the cinematographer points with pardonable pride, becomes a messy and vague puzzle when weakly projected.

There have been sequences, indeed entire productions, done in so low key and with such emphasis on effects that, while winning raves from professional audiences under perfect projection, have evoked protests of downright complaint

and resentment when screened by inadequate equipment.

Brodine is of the firm view that, projection being what it is, cinematographic practitioners must come to the realization that not all of their supreme lens achievements are practical to employ under existing conditions obtaining where the bulk of film profit returns emanate.

All of which factors express the ever-increasing problems confronting the cine-

matographer as he charts the pictorial delineation of a screen drama.

An exact balance, a correct bit of artistic tight-rope walking, is required to satisfy fully the widely divergent classes of audiences that envisage a pictured production the world over.

That Brodine uniformly bows to professional applause for his cinematographic creations without to any degree alienating his run-of-the-mill audiences is voluminous tribute to the searching soundness of his artistic technic.

An Insert-Car to Meet Today's Need

Continued from page 11

guard rail. The mount in the body of the car takes things up from the highest level attainable on the platform to a height level with the cab-top mount, which rises on telescoping rods to a position about eight or nine feet in the air.

The front platform is essentially similar to the rear one, but may be removed, and fixed in a still lower position when extremely low angles are needed. Its framework is rigidly braced by tubular members extending forward from the cab, and by turnbuckle-tightened tie-rods underneath.

Every effort has been made by the designers to allow ample floor-space for the camera crews.

When working with lights, the car carries a small, portable generator which is mounted low enough to be out of the way, and to keep the center of gravity safely low. The side-boards of the car-body are removed, and with them a two-foot strip of the flooring in the forward section of the body. Into this cubicle, the generator slides. When cameras are to be mounted in the center section, special supplementary supporting uprights are put into place just behind the generator, short horizontal bars are connected, and the mounts are used normally.

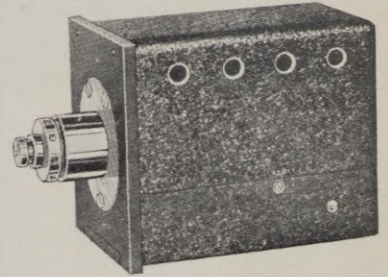
If all four of the camera mounts were used at once, at least eight cameras could be carried; frequently two heavy blimped cameras have been used side-by-side on a single mount, together with such accessories as lights, microphone boom, etc.

Four positions are available for towing other cars, wagons, etc., when such inserts are not to be made by the more general background-projection process. Heavy tubular towbars are provided at front, rear, and amidships, by which a car may be towed beside the insert-car, while a ball-and-socket jointed towbar can be mounted behind the rear platform for towing a car directly aft. It is quite possible to tow more than one car at a time. Incidentally, an unusually large and readily adjustable rear-vision mirror is fitted so that the driver

can always see what is happening to his tow.

In a word, the new car provides for any possible camera-angle with a rigidity that could never be approached in the old tripod-and-tie-down fashion. Everything is solidly mounted, yet instantly adjustable; there are no more expensive waits while the technicians improvise something on the camera-car—everything is there when the car leaves the studio, and has been since the car was designed. The smoothness, range of speeds, and pick-up have never been bettered, and the designers have tried to leave nothing wanting with respect to the cameraman's convenience and freedom of operation. Best of all, from the studio's point of view, the device

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Problems of Controlling Correct Photographic Reproduction

Continued from page 8

graphic reproduction, it is necessary to point attention to the fact that this problem can be considerably simplified if whenever possible the negative exposure level would be raised to a point which would guarantee rendering of all negative densities on the straight-line portion of the characteristic curve. The high speed and wide latitude of present day negative material permits this full exposure under the majority of light conditions. Thus, it is evident that dealing with linear contrast relations only the problem is appreciably simplified, at least as far as the negative is concerned. In the positive print, however, it becomes essential to place part of the reproduction in the curved-toe section to permit rendering of sufficient transparency in the highlights for a faithful reproduction of the overall brightness level.

The article next month will deal with an analysis of visual sensation in comparison to the characteristics of negative and positive emulsions.

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AMATEUR MOVIES

25c



t his issue

International Prize Winners
This Matter of Tempo
Adventures in Kodachrome
Lighting With Common Sense
A New Year's Continuity
... and other features

JANUARY
1936



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AMATEUR MOVIE SECTION

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Next Month . . .

- J. Belmar Hall will give us another interesting discussion on composition. He will treat somewhat from the Dynamic Symmetry standpoint, keeping it, however, in simple language.
- We will give you further information on entrants in the contest and give the list of those who won honorable mention.

PROFESSIONAL Criticism of the Amateur picture is a part of the service offered by the AMERICAN CINEMATOGRAPHER. Many are not aware of this. Hundreds of pictures have been reviewed this past year by members of the American Society of Cinematographers for the Amateur.



1935 Honors Split Evenly Between 8mm and 16mm

FOR THE THIRD YEAR an 8mm picture wins highest honors in the American Cinematographer Amateur Movie Contest.

This year it goes to a new entrant, an amateur who has not been active in our past contests.

While the prizes were fewer this year than in past years, still the competition was more keen than ever before. Last year was considered one of the biggest years; however, the count of both entrants and reels submitted this year more than doubled last year's entries.

The prizes were broken down into four classes, Home Movie, Scenario, Documentary and Photography. There were four prizes with the grand prize going to the best all-around picture. This, of course, would have to cover a certain classification. In this year's contest it was in the Scenario Class.

Only one prize remains in this country, the others going to Japan and England, with two going to England.

Again T. Okamoto presented a gem of photography, but close on his heels was R. B. Clardy with "Fisherman's Harbor." Clardy was the winner of last year's and a previous year's scenario and grand prize.

In the Home Movie class, Van Dee Sickler, who last year won first prize in this category, was very close in points to the winner.

All the way through it was a very close contest. The winners were shoved very hard by those who were runners-up. In some instances the winners achieved their goal by only a few points.

However, you are more anxious to know the type of pictures that won and just what they consisted of.

"Red Cloud Rides Again," the 8mm picture by Dr. Loscher which was given first prize, was based on a poem that dealt with the pioneers crossing the desert. Its main action had to do with a wagon train being attacked by Indians.

The manner in which Dr. Loscher handled this sequence would have done credit to a studio production. With only one wagon, three horses and six people at his command, he made it look like a production employing more in the way of properties and talent.

His angles, his composition and his cutting are things for every amateur to observe. His story could have easily become hackneyed by poor cutting and editing, but he kept it moving at a fine tempo.

"Moods of Nature" by Paul Brunford, recently won a prize in the Institute of Amateur Cinematographers' con-

WINNERS

GRAND PRIZE: \$250.00 Cash . Dr. F. R. Loscher, Los Angeles, Calif., for his 8mm picture, "Red Cloud Rides Again."

DOCUMENTARY: \$150.00 trade Bell & Howell . . . Paul Brunford, England, for his 16mm picture, "Moods of Nature."

HOME MOVIE: \$150.00 trade Victor Animatograph Corp. . . . T. Lawrenson, England, for his 16mm picture, "Happy Day."

PHOTOGRAPHY: \$150.00 trade Eastman . . . T. Okamoto, Japan, for his 8mm picture, "Autumn Leaves."

RUNNERS UP

In the Scenario class, under the name of Shoestring Productions, Frances Christeson, Perle Eddy, Harry Merrick and Emanuel Goldman were runners up with their 16mm picture, "Chronicle."

In the Home Movie class, Van Dee Sickler of Los Angeles, who last year won the prize in this class, was very high.

The Documentary class presented the greatest competition. There were two runners up. Fred C. Ells with his picture, "In the Beginning," and Leslie P. Thatcher of Canada, with his picture, "Fishers of Grande Anse."

Photography: R. B. Clardy of Los Angeles, with his picture, "Fisherman's Harbor," was very close in points to the winner.

test in England. Not only does Brunford show a fine sense of rhythm, but a keen eye for composition and a splendid sense of cutting and dramatic values in nature. This picture merely deals with a storm arising and then subsiding. Brunford uses both water and earth to show this. The smashing waves, bending trees and waving wheatfields combine to create his drama. His photography however, is something for which he is to be especially congratulated.

In the Home Movie field, Lawrenson submitted a fine document of a day with his little 2-year-old daughter. The main portion is given over to a day at the seashore. But he gives reasons for everything he does even to going home. He shows a storm coming up and after the family has arrived safely at home, the little tot looks out of the window while the raindrops patter on the windowpane.

Okamoto again demonstrates his fine sense of composition, repose and rhythm. Okamoto never hurries his pictures, neither does he hold them too long to bore you. He plans only to give you another fine picture, but he always puts life into his shots. Autumn leaves is a fine Okamoto offering, but in the opinion of the judges it does not contain the same spark of creation as his last year's effort, "Tender Friendship."

The Runners-up also deserve a word of commendation. Some of them showed great ingenuity. Ells with his pic-

Continued on page 40



Photo by G. M. Best

This Matter of Tempo

by
William Stull, A.S.C.

WEBSTER defines "Tempo" as "rate of movement; specifically . . . the pace at which apiece or passage moves." I suspect he wrote that definition many years before the cinematograph was invented, but he couldn't have better expressed what we mean today by "tempo" in a movie.

It is strictly because of a lack of understanding of this matter of tempo that so many home-movies are "draggy." And right here, let me say that tempo is just as important to any type of home film as it is to the most important dramatic production. The only reason for making any picture is the hope that it will interest an audience. That goes just as strongly for the baby's bath or a documentary exhibit

telling how to milk a cross-eyed muley-cow named Molly as it does for your club's thrilling production of "The Hazards of Hortense!" So if you want your films to be interesting, it's a good idea to get acquainted with tempo.

One of the chief advantages of the moving picture is the fact that it permits you to compress time, to suggest a tremendous lot of off-screen action without having to show it. For instance, if you want to put over the idea that I am going East, you don't have to show every step of the way: a shot at me packing, one of me buying a ticket, another of me going through a station gate labeled "Train No. 22—Omaha, Chicago, and Points East," a flash of some New York skyscrapers, and a shot of me unpacking tell the story in about fourteen seconds. From the evidence on the screen, I'm indisputably in New York. You could string the thing out three or four times as long with added detail—but it wouldn't make the screened effect a bit more convincing.

So point Number 1 in tempo is to say what you have to say as quickly as possible, without wasting needless time or energy on gratuitous detail.

Point Number 2 is, don't waste footage even in what you show. In the example just given, for instance, it isn't at all necessary to show me doing all of my packing, or to "follow" me after I've passed the station gate. In the first shot, the suitcase can be closed, and the camera picks me up pulling the last strap tight; then I pick up the suitcase and my hat, and START to leave—it isn't necessary to show me going to the door, opening it, going through, and closing it. In the same way, the shot at the ticket-office can begin just as I hand my money to the clerk, get my ticket, and end when I turn away, while the shot at the trainshed gate need only show me handing my ticket to the gate-man, after which the camera can pan over to the sign telling where the train goes.

The same holds true for almost any action you can imagine. It is seldom necessary to show a person crossing a room, for a shot of him coming in followed by a shot of him arriving wherever his important action is to be, is usually more than enough to tell the whole thing. In other words, show only the heart of any action—and forget the trimmings.

The physical speed of the action can often help a lot in telling your story. For instance, suppose you want to show, quickly, a person climbing a mountain. You could show him going through a number of different scenes, climbing higher and higher—but that would eat up a lot of footage. Instead you can get just as good an effect in two short scenes by beginning with a shot of him starting off briskly at the foot of the grade, followed (connected preferably by a lap-dissolve, a wipe, or fading out and then in) by a scene of him at the top, moving slowly, with his coat slung over his shoulder, and obviously hot and tired.

Carrying this same idea a step farther, you can use tempo to indicate all sorts of emotional impressions. Suppose, for instance, that you show neighbor Smith out for a comfortable Sunday morning stroll. While he is gone, an important telegram comes; his wife reads it and discovers that it contains bad news—so bad she gives the wire to little Willie and tells him to run after his father. By contrasting the slow tempo of long, detailed shots of Papa Smith's deliberate walk with sort, quick shots of Willie rushing breathlessly in pursuit, we can build up a really noteworthy effect. Similarly, if in the place of Willie and his message we have some physical destruction rushing along a course which may or may not intersect with Smith's path, we can

Continued on page 34



Photo by Emmett Schoenbaum, A.S.C.

Adventuring on the Kodachrome Trail

by
Henry Fonda

SIXTEEN-MILLIMETER filming is teaching me the real why and wherefore of professional movie-making. After having acted in several important productions, I'd begun to feel that I knew a little something, at least, about making motion pictures. Then I bought a 16mm camera and went into production for myself. And what a liberal education I've been getting! Things that seemed meaningless complications to me before, or had even been entirely overlooked, now turn out to be mighty important details—if you ignore them, your picture develops an aroma of fine old limburger on the screen!

My discovery of 16mm came just as I was cast to play in "The Trail of the Lonesome Pine." Ever since I came to Hollywood, I'd been Leicapicturing my studio experiences; but playing in the first outdoor three-color Technicolor feature just naturally called for color in my personal shooting. Kodachrome movies, of course, supplied the logical answer. I got myself a Simplex camera and some Koda-

chrome film, and set to work. My first idea was to make a silent, Kodachrome version of the picture: but on a feature like that, they shoot well over 200,000 feet of film which, translated into 16mm with all economy, would have had me exposing something on the more expensive side of fifty thousand feet of Kodachrome—which would be just too bad! After a few days of energetic shooting, trying to keep up with the Technicolor camera, I decided I'd better trim my plans down to something nearer my size.

But it had to be a regular production; I'd suffered through too many miles of random, animated snapshots to be interested in haphazard filming, even in color. So three of my pals and I are concocting a burlesque "Western." We're taking all the old clichés, all the tried and true hokum, and burlesquing them within an inch of their lives. It's lots of fun—but plenty instructive, too. Best of all, if we can finish the picture as well as we've started it, I don't think it will be one of those films that sends polite home audiences to sleep!

The purely photographic side of the job is easy enough. I simply use my Weston exposure-meter religiously—and that's that. Incidentally, I've found it mighty interesting to ask every other Kodachromer I meet what meter speed-rating he uses: I don't think any two of them have given me the same reply. Personally, I set my meter for a film-speed of 3, and get excellent results. In Kodachrome, as in most color-processes, you can to a considerable extent control the sort of color you get by controlling your exposure. If you want normal colors, try to hit the exposure right on the nose. If you want softer shadings, overexpose. If you want to brighten the colors, underexpose—or rather, cut down on your exposure. You'll be surprised what you can do this way!

I think you're likely to get the best results in Kodachrome if you do your shooting either very early in the morning, or late in the afternoon, when the shadows are long and interesting, and the light mellowly tinted. I've also heard it suggested that during the middle part of the day, you can get warmer effects by using an Aero 1 filter; I'm going to try it, anyway.

After shooting beside a professional troupe, one of the first things I noticed when I started "on my own" was the absence of reflectors. Don't let anybody tell you they aren't as useful to the amateur as to the professional! When you're shooting people with hats on, for instance, reflectors represent the difference between inky shadows—and faces that mean something. Especially in color! If you asked me to list the most useful accessories in Kodachrome filming, I'd put reflectors along with exposure-meter and tripod as indispensable.

One of the first funny things I noticed when I started to work in the studios was that every now and then the director (any director) would suddenly close his eyes, and make funny pointing movements in the air with his fingers, stabbing away to right or left like a candidate for a padded cell. Finally one day I broke down and asked a director what was the big idea. "That," he said, "is just an attempt to keep myself straight on whether to have an actor's look 'camera right' or 'camera left,' so they'll match up with the other scenes." That didn't make any particular impression on me—until I projected the first sequence of my own 16mm production. I'd gotten crossed up on that very point—and ran into retakes on my first day's work! I had people who should have been facing each other, talking violently into the backs of each other's necks. Doesn't sound possible, does it? But it is: you've got to remember

Continued on page 36



Two Photofloods made this: one in the reading-lamp by the bed; the other in a desk-lamp on a chiffonier just out of the picture at the left.

Lighting with Common-Sense

by
Walter Blanchard

A NUMBER of years ago, I climbed a mountain. I struggled up its rocky face, hanging on by toes, teeth and eyebrows, until at last I reached the top—and found a lovely, smooth pathway by which I might have ascended, without nearly so much trouble and so many bruised shins.

Interior lighting is a good deal like that mountain. You can make no end of work out of it—or you can use a little common-sense, and get there much easier. After all, why is interior lighting—is it to enable us to show off our technique, or to enable us to make pictures? If you say yes to the latter question, I'll ask another: why make pictures? My answer is, to show somebody doing something interesting and natural.

Now if we're trying to show someone doing something interesting and natural, there's no earthly sense in making the job either an ordeal, or a field-day for lighting trick-

ery. The main thing is to get a natural effect on the screen—and to Halifax with "light effects!" The really important effect to try for is that of absolute naturalness.

In a long-shot, for instance, the effect of naturalness is to have the room look on the screen just as it usually some, but not all, of the lights should be on: table and does to the eye—without suggesting that someone had set up camera and lights to make pictures. Let's see now—reading-lamps cast pools of light immediately around themselves, but there are plenty of shadows. Lighting such a shot for the camera, you could begin by putting a Photoflood into each of the reading-lamps. Sometimes, this will be enough, again, you may find it a good idea to slip a fairly high-powered bulb into the wall fixtures. Where the fixture is in the picture, a 75-Watt globe is usually enough, and using the inside-frosted type, on modern films, you won't have trouble with halation. In other fixtures, chandeliers, and so on, out of the camera's range, you can use Photofloods to add to the general illumination.

Generally, there is some definite point which you want to make the center of attention. The best way to do this is by making it the most brilliantly illuminated part of the picture. If you can't do this with the room's regular table and reading lamps, reinforced with Photofloods, this is the spot to light with your regular photographic lights. And—aside from this one area, don't be afraid of shadows; they simply add to the natural effect!

In closer shots, the problem is different: we still want the natural effect, but we want to add to it a pleasing presentation of whoever is shown in the shot. This introduces the matters of portrait-lighting and posing; but treated sensibly, they needn't be complications. A combination of a single Photoflood in a natural unit, such as a reading lamp, with a couple of regular photographic lighting units, should be quite enough to take care of the matter of illumination.

The first thing in any portrait lighting is balance—not the featureless, flat balance we get when both sides of the subject are illuminated equally, but the pleasing balance we get when one side is lit just a little more strongly, and the other is moulded with soft shadows. The elementary rule for this, of course, is to have two lights, one on each side of the camera, with one of them a little nearer to the subject than the other. It is important to balance the two sides carefully, so that the highlight side is not "burned up," while the shadowed side remains softly shaded—not a harsh, black shadow. Hard, sharp contrasts kill the natural effect.

In close-ups, the important part of the picture is the actor's face: it must dominate all the rest of the scene, and it must be shown to its best advantage. No two faces are alike, so no blanket rule can be laid down for lighting them. Study each face as an individual picture. Invariably, there will be some particular angle which is the best—some feature which is the best, and almost always, some less attractive ones which should be subdued. Ordinary common-sense tells us we should make the most of the good features, and try to minimize the poor ones.

For example, some people, if the light comes too much from the sides, tend to look "baggy" around the eyes. This can be corrected by having the light come more flatly from the front.

Everyone, too, has a "best" side of the face; naturally

Continued on page 39



New Year's Revolution-- A Comedy Continuity

by
J. Dickinson Reed

SCENE 1. LONG-SHOT of a Church with a number of cars parked in front.

Scene 2. MEDIUM LONG-SHOT of door of Sunday-school rooms. The children come trooping out, and go to the cars in which their parents wait.

Scene 3. MEDIUM-SHOT of Billy Smith: the camera follows him as he goes to his mother's car, gets in and drives off.

Scene 4. LONG-SHOT from the Smith porch: the car drives up, and Mrs. Smith and Billy come into the house. FADE OUT.

Scene 5. FADE IN. LONG-SHOT in the Smith living-room. Mr. Smith is comfortably seated in an armchair, reading the paper. He looks up as Mrs. Smith and Billy come in.

Scene 6. TWO-SHOT: Mrs. Smith and Billy sit down, and Billy leans forward, talking earnestly.

Scene 7. CLOSE-UP of Billy, talking.

TITLE: "... an' teacher said everybody ought to make resolutions to get over his bad habits in the new year ..."

Scene 8. Same as Scene 7. WIPE OFF.

Scene 9. WIPE ON: MEDIUM-SHOT of Billy at a desk. He has just finished writing something. He takes it, and gets up.

Scene 10. TWO-SHOT: Billy drops onto the arm of his father's chair, and shows him what he has just written. INSERT: 'Roll-up' shot of the paper, which reads:

New yerese rezulooshuns of the Smith Fammly:

Mr. W. SmiTh rezolvs to give up smoaking, keap-ing the funny paper and spanking Billy.

Mother rezolvs to give up gosipping and feeding us spinnich.

Billy Smith rezolvs to fold his napkin and be more considerick of mama and pappa. And to quit fiteing.

Sined —

Scene 11. LONG-SHOT of the family group around the desk. Each in turn sits down and signs the paper.

Scene 12. CLOSE-UP of a finger pressing the doorbell button.

Scene 13. Same as Scene 12. Mother leaves to answer doorbell.

Scene 14. LONG-SHOT toward doorway of living-room, Billy and his father in foreground. Mother enters, with a telegram in her hand. She seems excited.

TITLE: "It's from Grandma—she's going to visit us next week!"

Scene 15. Same as Scene 14, but very short. FADE OUT.

Scene 16. FADE IN: CLOSE-UP of calendar, with a January, 1936, date; if it is an ordinary calendar, have one date circled in red, with the previous days crossed off; if it is a one day to the sheet calendar, have a hand tear off a leaf. WIPE OFF.

Scene 17. WIPE ON: LONG-SHOT in front of house. The car drives up, and the three Smiths get out, escorting Grandma into the house. FADE OUT.

Scene 18. FADE IN. LONG-SHOT in the living-room. The family come in from dinner.

Scene 19. TWO-SHOT of Mr. Smith and Grandma. She presents him with a box of cigars. He pantomimes that he doesn't use them any more. She shows surprise.

Scene 20. MEDIUM-SHOT. Mr. Smith is about to sit down in his chair. Billy comes in with his father's slippers and smoking-jacket, and helps Smith Sr. into them.

Scene 21. CLOSE-UP of Grandmother, showing surprise.

Scene 22. MEDIUM LONG-SHOT. Mr. Smith sinks into his chair, picks up the paper, and carefully takes out the funny-section, which he gives to Billy, who thanks him politely.

Scene 23. TWO-SHOT. Grandmother takes a pair of boxing-gloves from a box, and presents them to Billy. Billy shakes his head, indicating he doesn't fight.

Scene 24. CLOSE-UP of Grandmother, still more surprised.

Scene 25. TWO-SHOT of Mrs. Smith in a chair; Grandmother draws another chair up close, and leans forward confidentially.

Continued on page 38



Harmony in Texture and Design

IN GOOD DESIGN we have many things that must be considered. As harmony is the final basis of good design we must consider the relations of all things used in composition as a whole. First we must have harmony in texture, such as wood, textiles, metals, potteries, and all made objects that have a quality known as texture which is fundamental in the idea of harmony between objects which are used together. If we were to use together, all things of the same texture, the result would be a monotonous textile composition. Textures should harmonize with the structural figure, and all stiff glossy fabrics emphasize the angular and stout figure, while soft dull materials soften the line of all figures.

Rough materials absorb light rays and blend, while glossy surfaces reflect light rays and are less capable of blending colors, thus showing a direct increase in size. When two or more textures are used together, one should predominate, the others become the subordinate or enriching aids.

Natural beauty of colorful material should enhance with the addition of design, never minimized or decreased. If a design does not enhance the material or article, it has no reason for being. If textural quality or color is sufficiently rich, do not hesitate to use it alone.

Textures of different materials reveal an interesting vibration or rhythm of color, as in interior decoration the stippled wall, carved stone, planished metals, or the frieze; shiny materials or surfaces reflect light or color to the eye while soft materials break up and result in a gradation of color. The beauty of certain textiles like satin, resides very largely in the fact that light, as it plays upon it produces a natural gradation of values. A yellow satin registers in its folds not only a rhythmic movement of values and intensities but even of hues, playing through the yellow-orange to orange and even to the blue side of the spectrum.

by
J. Belmar Hall,

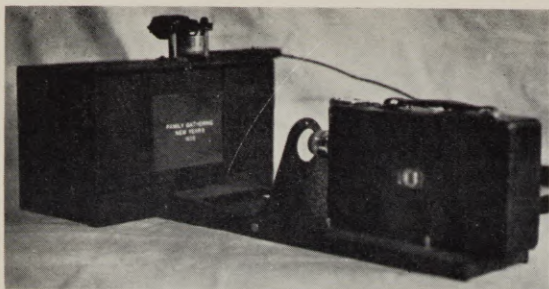
Instructor, Department of Cinema, U.S.C.

In structural design we have textures, which we call MASS; (soft), paper, cloth wood and stone; the accents to these are, hardwood, marble, metal, which are all glassy surfaces and are used to accent or embellish the design. In textiles we have lace, velvet and wool, which are the soft textures; satin, or sateen, the accents, with jewelry used for contrast; and brocades the enrichment note. Each has its place in design and must be used in relation to its proper proportion, then we are bound to have harmony. Harmony of texture is dependent upon the judgment of appearance of different materials used together or through the sense of touch of combinations of materials.

Design must have rhythmic movement, which we call dynamic symmetry and in the last analysis, is purely a matter of space relations, subdivisions, and as such is all composed of mathematical relations. If these relations are orderly, based on some law or laws, it makes for beauty, or whatever name one may give to a thing, which Di Vince called, "A marvelous necessity." The illustrations, 1, 2 and 3 are based on this principle; using the root two rectangle. Each interesting line that crosses is called the eye, and if we study these "eyes" we will find that they are the stopping point of some important line action. Dynamic symmetry is the natural law of all composition, because if we examine any thing in nature we will find that it follows this

Continued on page 37





Wipe-off Title

by
R.Y. Buerger

THE BASIS of this gadget is the works from an electrical clock, plus, of course, the regular titling stand.

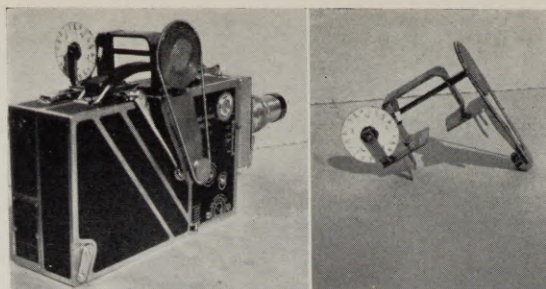
The electric clock as you know is based on the cycles and gives a complete revolution every minute. With these known figures it is simple to time the wipe-off arrangement.

The gadget was built around an Eastman titler. A black box was made to fit this titler. On top of the box the electric clock motor was placed. The shaft of the motor extends through the box and connects with the title-holder by means of a spring clip. There are two frames on the holder; one in the center to make a wipe-on and wipe-off or swirl which will take approximately 30 seconds. The reason it takes only 30 seconds is because it is not necessary to make a complete revolution of the wipe-off blade, but only a half revolution to obtain the effect.

The other frame with the white card is used for quarter turn, or wipe-on and stop or from a still to a wipe-off which takes about 15 seconds.

The box can be set on end to make a turn-up title or a turn-down title. I use the Eastman titler with the title-holder frame turned down to clear the title-holder in the box as you can see from the illustration above has to turn.

If you realize that an electric clock makes one complete revolution a minute, you can readily understand how its works can be adapted to a gadget of this kind. Some more handy gadgeteers may find a method for making barn-door wipes, etc., with this contrivance. However, it is a fine suggestion for experimenting.



Footage Indicator

by
L. McKinney

THIS FOOTAGE INDICATOR built for an Eastman Special 16mm camera, could with modifications be applied to most any other make of camera.

The indicator consists of a brass dial, painted white and graduated in feet and frames, mounted on a shaft together with a small bevel gear.

The assembly is mounted in supports at right angles to a main shaft upon which is mounted another gear, meshing with the first mentioned gear and a brass disc grooved to take a coiled wire belt.

The main shaft support is mounted on a brass plate base with prongs on the underside to hold indicator in place on the camera. On one end of the base a brass strip extends down to the shaft carrying the winding crank and at the point in line with the winding shaft a short shaft is mounted having only one bearing. At the end of this short shaft next to the camera is a collar with a square hole in it, which fits over the square projection of the camera winding shaft. At the other end of this shaft and on the other side of the brass strip supporting the shaft is a small brass disc grooved for the belt.

The ratio of RPM between the graduated dial and the camera winding shaft is 1 to 5 and there is therefore 5 feet of film per revolution of the dial.

An index mounted at the edge of the dial and a coil wire belt complete the indicator. The indicator is very easily slipped on and off the camera and can readily be reset to zero without removal.

The advantage of this indicator over the one built into the camera is that it is easier to read, can be read closer and can easily be read while sighting through the viewfinder and it is therefore extremely useful in all double exposure work.

Just What Is "Montage" Anyway?

WHAT IS "MONTAGE"?

When asked, one receives as many different replies as there are people to whom the question was broached.

A cutter will tell you that it is nothing else but a French word, the translation of which means "mounting," by which the art of film-editing is meant. He goes out from the viewpoint that the word was invented by someone who wished to awe the world.

To a cameraman the word "montage" means little more than angle-shots; the screwier the angle the better the "montage."

A director will stare for a moment in the beyond when bothered by the asker, and, describing a vague gesture in the air with a hand, he will reply that "montage" is something . . . , something that some pictures possess and others lack.

And to an actor it is just "nuts."

To a set-designer it embodies the amount of outstanding sets the picture boasts.

The special-effects department will tell you gleefully that when a picture is devoid of "tricks" it lacks in "montage."

From the production-department the questioner merely receives a cold stare.

And the question remains unanswered. Everyone is treating the question from a personal viewpoint and endows the answer likewise, never giving it another thought or a faint suggestion of an attempt to explain it purely from a motion-picture viewpoint.

In framing an explaining answer to this all-important question one must have at his command a complete and detailed understanding of the motion-picture laws, as otherwise one is at a loss to fully explain the intricacies and purposes of "montage," and therefore unable to apply it intelligently and to its fullest scope to the betterment of the motion-picture, endowing it with a much greater power than would be possible any other way, for "montage" is built on the power of suggestion.

What is "montage"?

MONTAGE IS A COMPOSITION OF STRIPS OF FILM, WHICH IN THEIR COMBINATION AND ARRANGEMENT TO ONE ANOTHER CONVEY TO THE AUDIENCE A (SUGGESTED) IDEA OR EMOTION; BUT LACK THIS ABILITY WHEN TORN APART AND PROJECTED SEPARATELY.

In analyzing this answer our attention is called immediately to the power we have here at our command, a power so great that it is liable to boomerang when used inexpertly inasmuch as we are able to bring over an idea or emotion to the audience merely by the use of simple strips of film which are utterly lacking in themselves in bringing over anything at all; in other words: strips of film which in themselves, and when projected singly, are absolutely meaningless. It stands to reason that when these meaningless strips of film are composed and arranged in a faulty way they either will not achieve their power, or achieve it in such a way that they convey an entirely different idea than what is demanded, thereby throwing an entirely different light on the development and progress of the story that the film is telling, and in such a way are able to make the audience laugh where it should cry, or vice versa.

by
Max Liezt

Inasmuch as these meaningless strips of film only achieve their ability to bring over an idea when set in their proper arrangement to one another it is of the utmost importance that the "arranger" must be a person who has a profound understanding of the motion picture laws as otherwise more havoc than good will be achieved and the picture, as projected in the theater, will fall flat.

Knowing what "montage" is able to do, it is imperative that we answer the question: When should "montage" be used?

"Montage" should, and must, be used wherever there is danger of the audience getting ahead of the story. Inasmuch as we are able with "montage" to convey an idea within the space of a few seconds, without "montage" it would take us minutes to bring over a point that is becoming familiar to the audience in seconds by means of their speedy deduction from the previous scenes, and on account of the speed of the mind the audience would be familiar with this particular point in the story long before the film would have scored it, creating in the mind the statement: "The picture is draggy!", and cause the audience to lose interest in the picture.

"Montage" is especially of great value to us when it is used in defining or building of a character in the picture. By this process we can in a few seconds tell the audience everything about a character that it needs to know for motivation of its actions later on, without thereby interfering with the steady unfoldment of the story.

To illustrate the tremendous power of suggestion in "montage" I shall cite an example whereby we shall make use of only three meaningless strips of film, utilizing two of these to create two entirely different and opposing emotions in the third one.

These strips of film are: a shot of a tiger, a shot of a kitten, and a close-up of a man's expressionless face. When projected singly each of these film-strips is meaningless as to idea or emotion.

However, by connecting the blank face with the kitten we suddenly find ourselves reading a tender expression into the man's face.

Now we connect the same blank face with the film-strip of the tiger and we find ourselves reading cruelty into the man's face.

But both times it has been the same strip of film with the same expressionless face, but on account of "montage" with two other meaningless strips of film we were able to create two distinctly different emotions (ideas) in the audience's mind.

When "montage" is understood intimately and employed intelligently, the picture in which it is utilized gains all around.



WHEELS OF INDUSTRY

Eastman Magazine Cine-Kodak

● Eastman Kodak Company has produced a new 16mm Cine-Kodak loading with a magazine and having other features further simplifying the taking of motion pictures by the amateur and at the same time providing him with increased versatility of operation.

In addition to the use of a magazine, thereby eliminating the operation of threading the film, the new camera has three speeds, interchangeable lenses, a device that prevents accidental exposure while the camera is not in use, an automatic shut-off for the spring motor, and an ingenious device described as a "pulse" for timing the length of scenes.

Appropriately named "Magazine Cine-Kodak," it can be loaded in three seconds, merely by opening the hinged cover of the camera, as if it were a book, slipping the magazine inside and closing the cover, without having to adjust a single thing inside the camera or on the magazine. Sliding a finger tab on the top of the camera releases the cover for opening and locks it when closed. A further slide of the tab sets the mechanism for operation. Until this is done, the mechanism remains locked and there can be no accidental exposure.

Another eminent advantage is the ability to exchange partly used film for another type without having to run the entire footage to do so. Thus, to switch from Panchromatic to Super-Sensitive "Pan" for indoor pictures or to Kodachrome for color "movies," it is only necessary to remove the partly used magazine and replace it with a magazine loaded with the film desired. A magazine can be removed without the necessity of wasting a single frame of film because of a protecting slide which is moved over the film aperture of the magazine by the same operation that unlocks the cover of the camera. One may have any number of partly used magazines which may be returned to the camera to complete the exposure. The magazine protects the film. A footage meter on each magazine shows how much film has been used, whether in or out of the camera. The dial may be plainly seen through a shatter-proof window in the camera cover.

The Magazine Cine-Kodak also gives

the amateur increased versatility in speeds. There are three of them—normal, half speed and slow motion—controlled by a lever located beneath the built-in exposure guide on the front of the camera and marked "8," "16" and "64."

The new and intriguing device called a "pulse" is located in the side of the camera—a tiny button over which the finger is placed and which "beats" every half foot, or 20 frames, while the film is being run. This is of great convenience in timing the length of a scene.

With the Magazine Cine-Kodak are supplied the same accessory lenses available for Cine-Kodak K and Cine-Kodak Special—the 2-inch f.3.5 and the 3-, 4½-, and 6-inch f.4.5 telephoto. There is an inexpensive adapter which fits them to the camera by a simplified method. To make a change to any one of the four, the standard f.1.9 lens is removed merely by pressing a button, and turning the lens. The adapter fits as easily in its place. Then the other lens is fitted on by sliding a lug on the lens into a slot in the adapter; the rotating collar is given a turn or two, and the lens is set in positive, taking position.

In focusing, guess work and squinting are taken out by the full-vision eye-level finder system, which competently serves all lenses. The front view finder has two elements. Together, they show the field of the standard f.1.9 lens. By sliding the rear element backwards along a track it "clicks" into a notch identified by an arrow as the position for use with the 2-inch lens. Another move backward and it further narrows the field as it slides to the position for the 3-inch lens. Again in the same

way for the 4½- and 6-inch telephotos.

Two other salient features of this camera are the secured winding crank, which swings back into a notch in the case when not in use, and an automatic shut-off for the spring motor, which insures against over-exposure when the motor is in need of winding. All in all, Magazine Cine-Kodak constitutes a notable advance by Eastman in the further simplification of home "movie" making.

New Kodachrome Processing Station

● Eastman Kodak Company has opened another completed Kodachrome processing depot at Chicago. There are now three such stations in the United States, the two others being located at Rochester and Los Angeles. The address of the Chicago station is 1727 Indiana Avenue.

New Agfa Processing Station

● In order to give faster service to the users of Agfa 16mm reversible film in Northern California and the northwestern states, Agfa Ansco has appointed the Motion Picture Service Company, 125 Hyde Street, San Francisco, Cal., as an authorized Agfa Ansco 16mm finishing laboratory. This new 16mm finishing laboratory has installed complete new and modern equipment for the processing of 16mm reversible film and is now ready for operation under the supervision of a trained Agfa 16mm technician. Agfa 16mm reversible films sent to the Motion Picture Service Company will be finished promptly and returned to the sender without charge.

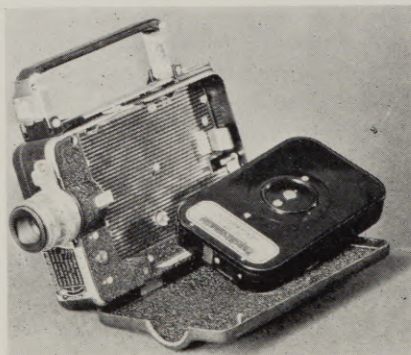
Authorized Agfa Ansco 16mm reversible film laboratories are now located in New York City, Chicago, Kansas City, Los Angeles, San Francisco and Montreal.

Rolleiflex Exhibit

● Alajos Schuszler, who won the first prize with his picture of a team of horses at a watering fountain—at the Rolleiflex Exhibition and Salon—held at the showrooms of Burleigh Brooks last Spring, will hold a one-man exhibition consisting solely of photographs made with a Rolleiflex camera—from December 26th to January 11th.

This exhibition will take place at the

Continued on page 39





New versatility from new accessories

CINÉ-KODAK SPECIAL

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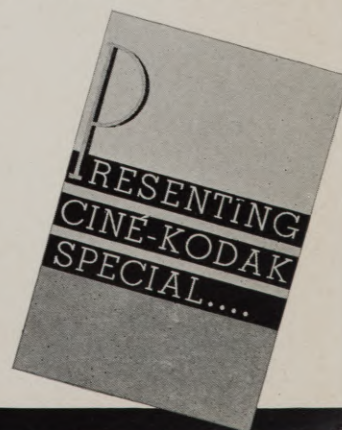
TWO new features, several new accessories, now add to the remarkable efficiency of Ciné-Kodak Special.

New features: A Frame Counter and an Audible Shutter Warning. The former's easily read dial keeps you posted on the passage of each of the forty film frames of each film foot, whether being exposed or wound back. The Audible Shutter Warning notifies you that the adjustable opening shutter has been closed, thereby banishing the possibility of wasted footage.

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New accessories: An Optical Finder for the exact determination of the fields of all lenses at all distances, Electric Motor Drive with speeds from 1 to 64 frames per second, Reflex Finder Image Magnifier for split-hair focusing, Lens Extension Tube Outfit for filming objects as small as .047 inches in width, and a new telephoto lens set-up of many decided advantages.

free — The whole story is to be found in the Ciné-Kodak Special Presentation Book, yours upon request. Eastman Kodak Company, Rochester, N. Y.



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News of the Clubs**Chicago Club**

● The Chicago Cinema Club must be gluttons for punishment. Their latest bulletin indicates one meeting a week is not enough; extra meetings will soon be held on Monday nights in addition to Thursday night. Why don't they run double features like the regular theatres and pack it into one night? However, congratulations, that's what might be termed real incurable amateurs.

Los Angeles Elects

● In its December meeting the Los Angeles Cinema Club elected a new staff of officers. Franklin B. Skeele was given the post of president. Skeele was secretary several years ago. Mr. Gram was elected as secretary and treasurer, while Dr. Leroy Bailey, the former secretary, was made vice-president.

At the meeting the winners of the

annual prizes were announced. Dr. Linek won first prize with his 8mm picture of the "San Diego Fair." C. E. Memory won second prize with a documentary picture called "Pacific Highways." President-elect Skeele was also among the winners with his vacation picture titled "Hook, Line and Sinker."

Los Angeles 8mm Club

● The Los Angeles 8mm Club elected new officers at its annual banquet meeting. Dr. Henry A. Linek was made president, Mr. G. Ward was elected secretary and treasurer and Mr. E. Janda, vice-president.

At this meeting winners of the annual prizes were announced. The first prize went to Dr. Loscher for his picture "Red Cloud Rides Again;" the second prize to Claude Cardarette for his picture "Conscience," and the third to R. B. Clardy for "Fisherman's Harbor."

This Matter of Tempo

Continued from page 25

by the same method build up to a high state of suspense: will he get out of the way in time, or will he amble unsuspectingly into the path of the onrushing danger?

Another place where we meet old man tempo is in camera-angles and the positioning of the players. Oh, yes, and we can make him work for us in a surprising variety of ways. Generally speaking, the larger an object is in the picture or, to put it differently, the closer it is to the camera, the faster it seems to move. For instance, if we make an extreme long-shot of a train—even the latest streamline speedster—it rarely gives much of an impression of speed. If we come closer, so that the train fills more of the screen area, the apparent movement speeds up appreciably; and if we make a real close-up of the train—even a dyspeptic freight—our audience gets the impression of roaring, break-neck speed. If you saw the professional film "Silver Streak," you may have noticed this fact. In it was a long sequence in which the celebrated Burlington "Zephyr" apparently ran wild; it was supposed to furnish one of the big thrills of the picture—but it fell flat because the director chose to play it largely in long-shots which gave no impression of speed. Only in the extremely few closer shots did you have any feeling that the train was really rocketing along at a hundred-mile clip.

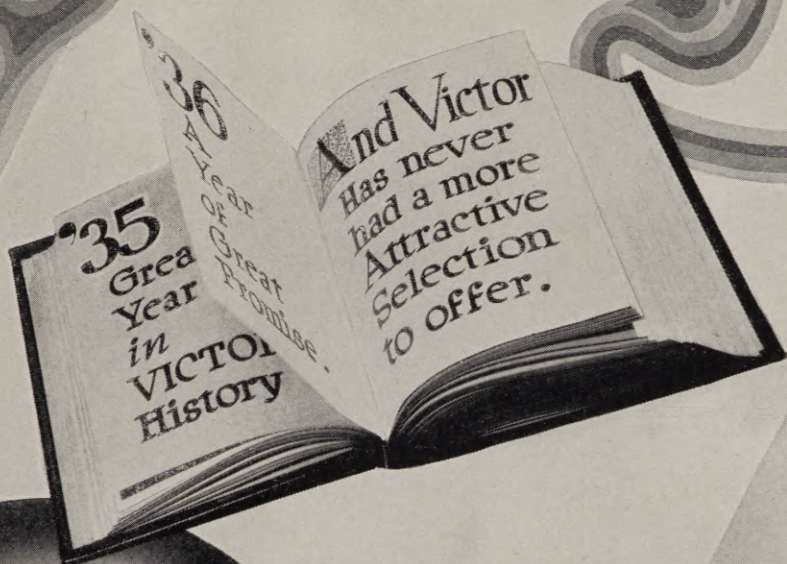
This same rule holds good no matter

what the action is: our subject may be a racing car, an airplane, the "Normandie"—or the kiddies playing in the back yard. Always, the commanding position is that nearest the camera.

An important contributing factor in this, of course, is the fact that in showing swift-moving action in close shots, most subjects get into and out of the picture very quickly, so that the scene occupies only a few split-seconds of screen time. Obviously, then, you can do a lot to pep up a lagging tempo by cutting down on the length of your scenes. Generalizing once more, if we want to set a slow, placid tempo, we should use long-shots, and allow them plenty of footage; and we should have relatively few cuts from one shot to another. On the other hand, if we want a fast tempo, we should use closer shots, clipping them short, and using more of them, to give variety and zip to the sequence. A wisely selected assortment of different camera-angles on the action can help, too. But here's another thing to remember: if your scenes are short, and your action fast-moving, choose angles that are easily understood. Save the intricate, "arty" angles for slower-paced sequences. Let's say the average 16mm scene is five feet long; that gives the audience ten seconds to see it and grasp its meaning before the next shot comes along. If we're setting a fast tempo with close, short-trimmed shots, this time may be cut down to but one or two seconds—or even less: and if

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the way the camera shows the action to
 the audience isn't simple and quickly
 understood, the shot will be gone before
 the viewer has a chance to figure out
 what he's looking at.

Using these last two tempo-builders—
 close angles and quick cutting—it is easy
 to build up to a fast tempo from a slow
 start. You can begin with long-shots,
 cut fairly long, and work progressively
 closer and shorter, until you have things
 moving to a climax comparable to a
 Russian Montage sequence. On the

other hand, since a fast tempo such as
 this usually builds to a really important
 climax, it's not often advisable to at-
 tempt the reverse of this trick when you
 have to slow down, though a skillful
 cineaste can do it. Much better, as a
 rule, to use a very slow transition like
 a slow fadeout followed by a deliberate
 fade-in. This breaks the chain of
 thought definitely (which you usually
 want to do) and by its slow-paced
 bridging over to the next sequence, paves
 the way for a more deliberate tempo to
 follow.

Adventuring on the Kodachrome Trail

Continued from page 26

that the camera represents the eye of
 the audience, which will see the various
 scenes in relation to each other. So
 if you want things to look right on the
 screen, you've got to direct your scenes
 so that, when they are cut together,
 every angle and action will fit in prop-
 erly with the impression established by
 those already shown. Often this will
 entail shooting things in a way that, at
 the time, seems absolutely wrong, but
 which if you'll only stop to visualize your
 whole sequence as a projected picture,
 will prove to be right on the screen.

Another tricky matter is that of exits
 and entrances. If I show a fellow leav-
 ing a scene "camera right," I must show
 him entering his next scene from "cam-
 era left." The first scene establishes
 a direction for his movement in the au-
 dience's mind, and if he reverses it in
 succeeding shots (without being shown
 doing something which would account
 for the change) the audience will be
 confused, and feel that something
 screwy has happened. By the same tok-
 en, in "chase" sequences, this matter
 of continuity of movement is doggedly
 important. Suppose, for instance, that
 I show Jim Stewart leaving one scene
 with a posse at his heels. He leaves
 the scene heading "camera right": well,
 he's got to enter each succeeding scene
 from "camera left" until he escapes or
 gets caught—unless I very clearly show
 him doubling on his tracks; then he
 would just as naturally have to carry on
 his movements from right to left. The
 posse, too, must leave the first scene
 going "camera right," and enter suc-
 ceeding ones from the left. On the
 other hand, if Jim and the posse are
 going in opposite directions—either away
 from each other, or approaching each
 other—one must always move across
 the screen in one direction, and the
 other in the opposite direction. It
 darn near breaks your heart keep-
 ing these things straight, for you'll
 be doing things that are abso-
 lutely illogical in real life, and you'll

often have to forego shots that would
 be highly effective individually if shot
 some other way—but the real effect is
 what shows up on the screen. Similarly,
 if you want straight angles on such
 scenes, remember that the person being
 chased should be shown going away from
 the camera, and the pursuers always
 coming toward the camera.

We've had a lot of fun kidding the
 styles of some of the professional movie-
 makers. For instance, there is one com-
 pany which almost always begins its
 pictures by a succession of close shots
 of the principal players—just by way of
 introduction. We're doing the same
 thing, with variations. For the past
 month, we've grabbed a close-up of
 every Tom, Dick and Harry that came
 near the house—the postman, the ice-
 man, the milkman, the grocer's boy,
 and everyone else. We'll open the pic-
 ture with an endless succession of these
 close-ups—and then ignore the people
 shown! Another tradition we're dese-
 crating is the business of "reactions"—
 you know, "A" shoots "B," and at the
 shot, you are shown "flashes" of a doz-
 en other characters reacting to the
 sound. We're shooting each of our re-
 actions three times, each "take" being
 identical with its companions. So
 when, in one sequence, we show a fel-
 low reacting to the sound of a shot
 by suddenly stopping lathering his face
 and looking up, we'll also use the same
 reaction for anything else he's supposed
 to react to—even if the action of the
 later business may be at midnight, or
 what he's to react to is entirely differ-
 ent.

In one sequence, we've essayed a dual
 role. Jim Stewart, dressed as a cowboy,
 climbs up onto the roof of the house,
 and carefully scans the horizon. In the
 distance he sees—Jim Stewart, in a
 different costume, approaching. The sec-
 ond Jim Stewart glides through the
 bushes, watching Jim No. 1. The Jim
 on the housetop reaches for his gun; the
 lower Jim pulls out a huge cap-pistol

(obviously a cap-pistol, as proven by a close-up), and fires. Jim-on-the-roof is hit, and starts to fall. Then we show three short "flashes" of him falling—but they are identical "flashes!"—a flock of assorted reactions from innocent bystanders, and finally the defunct Jim plops onto the ground, as though he had fallen from a tremendous height. A tremendous flow of gory red blood (actually beet-juice, but in Kodachrome it makes swell blood) gushes from his mouth. Jim-on-the-ground comes over, looks at the remains, and proceeds to kick his own corpse in the face! How was that done? Just a matter of cutting: close shot of the corpse, long-shot of Jim approaching the camera, close-up of him looking down scornfully, close-up of his "remains" on the ground, with a pair of legs in the background (Jim's trousers and shoes, occupied by someone else), and the kick itself. On the screen, you'd swear Jim had kicked himself!

And we've struck a knockout of an idea for our opening title. We're going to give the opus a very melodramatic name—something like "Hearts Aflame," or the like. For our opening title, we're going to stretch a generous roll of cotton just below the lower camera-line. After dousing the cotton with lighter fluid, to make it burn hotter, we'll sprinkle on a copper oxide powder one of the studio prop-men told me about, so that the flames will be spectacularly colored red and green. We'll open the title on these flames; then we'll lower a sheet of tissue paper, into which the title-lettering is cut like a stencil, between the flames and the camera. After we've made enough footage of the flaming letters, we'll set fire to the tissue, and let the title burn itself away from the bottom up. At least, we'll start the picture off with a real "hot" title!


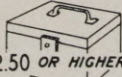

Harmony in Texture and Design

Continued from page 29

law and no matter how the elements in nature may force some growth into other paths that are not natural to it, it will retain within itself its proper proportion as a whole. The screen proportion is nearly a root two rectangle and since the advent of sound comes nearer to the proper dimensions for perfect composition.

Illustrations 4, 5 and 6 show how the cinematographer paints with light in dynamic relation so as to get the most striking effects. The massing of light and shade is important to good composition so that the tonal qualities of textural surfaces will show to the best advantage. Dramatic lighting creates the mood and holds the spectator's attention throughout the entire sequence

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and it helps build up emotional reactions that the actor could never attain. With the 16mm camera, the cinematographer has to pay more attention to dramatic lighting because his reversal print cannot be doctored in the printing, so any effects must be thought out before shooting the scenes. Don't be afraid to put back-lighting in your scenes, as interiors must show depth, and

it is the back-lighting that gives photographic depth. In the next month's issue I will give some diagrams of lighting for effects. With the super-speed film on the market you can now have a greater range of good photography as I have made some tests with only window light and find by simple masking you can create pictures that are dynamic without the use of many photo-floods.

New Year's Revolution

Continued from page 28

Scene 26. CLOSE-UP of Grandmother talking.

TITLE: "Did you hear about Cousin Hattie's . . . ?"

Scene 27. CLOSE-UP of Mrs. Smith. She assumes a very righteous expression, and shakes her head, indicating "I don't care to know."

Scene 28. CLOSE-UP of Grandmother. She is absolutely flabbergasted.

Scene 29. MEDIUM-SHOT of Grandmother. She sits in her chair, slowly rocking, and obviously trying to understand what has come over the family. Suddenly she shows that she's made a decision, and gets up.

Scene 30. CLOSE-UP of Grandmother, talking excitedly over the telephone. WIPE OFF.

Scene 31. WIPE ON. LONG SHOT (night effect) on a street. A car rushes up, coming toward camera. WIPE OFF.

Scene 32. WIPE ON. LONG-SHOT of house, from across the street (night-effect). The car seen in the previous shot skids to a stop. A man carrying a small bag gets out and hurries to the door. WIPE OFF.

Scene 33. WIPE ON. MEDIUM LONG-SHOT at door (from outside). Grandmother opens it, and hurries the stranger inside. WIPE OFF.

Scene 34. WIPE ON. LONG-SHOT in living-room. The family is standing around in attitudes of surprise, while Grandmother talks excitedly to the stranger.

Scene 35. CLOSE-UP of Grandmother, talking very excitedly.

TITLE: ". . . and, Doctor, they're every one acting so unnaturally I just know something's wrong . . . !"

Scene 36. LONG-SHOT, same as Scene 34. There is a pause as Grandmother stops; then Billy steps forward.

Scene 37. MEDIUM-SHOT of Billy. He steps forward, pointing accusingly, and talks.

TITLE: "Your wife started it, Doc—that prize she offered the class for keeping resolutions. I was gonna get it

an' trade it for some boxin' gloves an' clean up on Tommy Jones!"

Scene 38. LONG-SHOT, same as Scene 34. Everyone relaxes; all laugh except Billy. FADE OUT.

TITLE: THE NEXT EVENING.

Scene 39. FADE IN. LONG-SHOT of the living-room. Mr. Smith is in his chair, reading the paper. Mrs. Smith and Grandmother have their heads together in the corner talking eagerly.

Scene 40. CLOSE MEDIUM-SHOT of Mr. Smith. His face is hidden behind the paper, on the back of which is obviously the funny sheet. Great clouds of smoke puff up from behind the paper.

Scene 41. TWO-SHOT of Mrs. Smith and Grandmother — obviously gossiping.

Scene 42. MEDIUM LONG-SHOT in doorway. Billy enters: he wears the boxing gloves; his eye is blacked, a tooth missing, and his clothes mused, but he is obviously happy.

Scene 43. CLOSE-UP of Grandmother. She looks around the room contentedly; obviously she finds everything normal and satisfying. FADE OUT.

THE END.

This continuity will be even more enjoyable to make and show if you adapt the resolutions (and their results) to suit the failings of your particular family. Scenes 30-34 should be made very short, with quick wipes to give a montage effect; it is a good idea to "undercrank" them, shooting them slightly below normal speed—say around 12 frames per second, so the action will be abnormally fast. The night-effects in Scenes 31 and 32 can be made by day, using a red filter (on Pan film) and underexposing. Scene 33 is best made at night, with all the light coming from within the house. All three of these scenes gain in effectiveness if tinted blue.

In Scene 42, Billy's black eye can be created with burnt cork; the apparently missing tooth by a simple application of Max Factor's black tooth enamel, which is made specially for such effects. A few faint traces of the burnt cork on other parts of Billy's face can suggest dirt and bruises, too.

WHEELS OF INDUSTRY

Continued from page 32

showrooms of Burleigh Brooks, 127 West 42 Street, New York, and will consist of about 200 prints, many of which feature diversified and interesting activities and developments which have recently taken place in the public parks of New York City. All of them illustrate the versatility of the Rolleiflex camera and its unique adaptability to varying photographic conditions.

"Ethiopia" in 16mm Film

●The first new single-reel 16mm motion picture subject on Ethiopia, sound-on-film or silent, is announced as available for sale or rental by the Library Division of the Bell & Howell Company. This timely and vitally interesting film portrays the nature of the country and the intimate daily life of the people. The sound narrative, entirely free from forced "wise-cracks," provides an intelligent, fair, and unvarnished presentation of Ethiopian history, population, form of government, economic peculiarities, trades, religions, and many other points of interest.

It is not a transitory "war" film, although thousands of tribesmen, afoot and on horseback, are caught by the camera, and the problems of providing food for a vast army are drastically portrayed. A high spot of the film is the raw-meat-eating ritual of courage, practiced by the army on the eve of its departure for battle, under the watchful eye of the Emperor. The photography, of intense interest and high educational content is by Burton Holmes, world-renowned traveler.

The sound version can be rented. A silent version, with copy of the narrative text supplementing a minimum of titles, will also be available.

B. & H. Sell Printers

●Metro-Goldwyn-Mayer, Paramount, and Columbia Pictures have contracted for the installation of new duplicating equipment known as Automatic Sound and Picture Printers.

These printers were developed in the engineering and research laboratories of the Bell & Howell Company, Chicago, and have been perfected as the result of five years of development.

Both the picture and the sound track are automatically reproduced on these machines at one operation, retaining all of the depth and definition of the original film and without loss of the full range of the recorded sound. As a result, pictures are now being released combining such photographic excellence and faithful sound reproduction that the

most critical audience will be free to enjoy the new films as pure entertainment without making allowances for losses due to imperfect printing.

Unlike the printers formerly used, the new machines are entirely independent of the skill of the operator. Although running at higher speeds, these printers are equipped with interlocking controls and safety devices which make them entirely foolproof. They will stop instantly and automatically in case of film breakage, lamp burn-outs, power-line variations or failure of the air-supply lines which vacuum-clean the film while it is being run. Film waste is thus entirely eliminated.

Lighting With Common-Sense

Continued from page 27

that is the side to present to the camera. John Barrymore's celebrated profile, for instance, was always seen from the left; even in its heyday, his right profile was distinctly unimposing. I have a friend who, from the right, looks strikingly like John Gilbert—while from the left, he suggests an intoxicated owl! Pick your victim's best angle!

Suppose your subject has a thin face, or high, Indianesque cheek bones. These qualities can be subdued by having the light aimed to fall rather low on the cheeks—just below the point of the cheek bone.

Those big, square "captains-of-industry" lower jaws will stand out like a sore thumb if you shoot a full-face angle; but they retire into the background if you keep the subject's head turned slightly to one side or the other. Weak chins—and multiple chins, as well—can be improved by having the subject keep his head tilted up a bit.

Noses can be quite a problem. In the first place, they are likely to cast unpleasant shadows. But these shadows can be eliminated in two ways: first, by having the lamps in a rather high position, so that the shadow falls at a natural (and therefore pleasing) angle—generally coming down to about the corner of the mouth. Or the shadows can be eliminated completely, by lighting very flatly. If a nose is bent, as many are which have been broken and poorly set, you can often hide the bend by shooting from a three-quarter angle, rather than full-face, and outlining the top of the nose with a rather strong high-light from the rear.

Especially with women, the moulding of the jaw must be considered; if the lines

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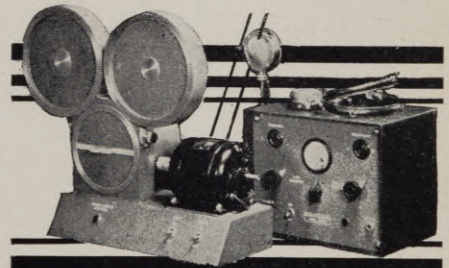
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of the jaw and cheek are to look their best, they should be accentuated with shadows, especially if the throat is bare. The soft shadows prevent the jaw, cheek and throat from merging into one and turning a lovely girl into a chinless wonder. This sort of treatment is especially helpful in photographing those healthy, chubby-cheeked folk whose faces, if you don't watch out, are likely to show up as round as a full moon. Thin, hollow-faced beauties, on the other hand, look best if their faces are lit quite flat.

The eyes, of course, are almost always the really commanding feature. With few exceptions, they need light to help them tell their story. Dark shadows where the eyes should be will kill the best shot. If the eyes are deep-set, hiding under heavy brows, they should be lit from a relatively low angle. On the other hand, protruding eyes should be lit very flatly, so that there are no tiny shadows to tell that the subject has pop-eyes.

Briefly, then, the easy way of lighting is to forget that you are lighting a picture, and to follow the sensible course of trying to make things look natural. Then they'll almost always be pleasing.

1935 Honors

Continued from page 24

ture, "In the Beginning," put forth an idea that permitted him a very wide latitude in the selection of things to photograph. This in itself is very commendable. So many pictures do not have an idea. He based his picture on the Bible, the creation of the world. The music he furnished with it was both inspiring and thrilling. Without music some might consider it somewhat lengthy and should be cut. Unfortunately it could not be presented to the judges with music as it was felt that it would not be fair to the other entrants. It is conceded that good music will help a picture from 50 to 75 per cent in its entertainment value.

We think so well of this picture that we are going to duplicate it for distribution to the clubs with the other prize-winning 8mm pictures of 1935.

"Fishers of the Grand Anse" by Leslie P. Thatcher, showed a splendid sense of documentary value. He kept interest throughout his picture.

The producers of "Chronicle" must be commended for a novel treatment. They employed the hands only to show the life of a boy from his third birthday until maturity. Into this novel treatment they spun a story of the boy's downfall until he is found guilty of murder and is incarcerated. All of it was interior and was well photographed.

Next month we will give you the list of those who were extended honorable mention.

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Amateur Movie Contest



This month's issue gives you the winners of the American Cinematographer 1935 Amateur Movie Contest.

Start thinking about your picture for 1936. The contest will close on November 30th.

This contest will be divided differently again. We will endeavor to give wider recognition . . . that is to offer prizes for more classifications.

Each year presents a different problem . . . it is to solve these problems and in an effort to recognize the serious efforts of the amateur that classifications are changed from time to time.

The rules will be the same as last year. You can enter either 8mm or 16mm film. 35mm film will not be accepted in this contest, nor will reductions from 35mm film be allowed.

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